SPLICE FORM 1: CGTCCTTCCT GGTCCTGCGG GTCCAGGACT GTCCGCGGGG TTGAGGGAAG GGGCCGTGCC CGGTGCCAGC CCAGGTGCTC GCGGCCTGGC TCCATGGCCC TGGTCACAGT GAGCCGTTCG CCCCCGGGCA GCGGCGCCTC CACGCCCGTG GGGCCCTGGG ACCAGGCGGT CCAGCGAAGG AGTCGACTCC AGCGAAGGCA GAGCTTTGCG GTGCTCCGTG GGGCTGTCCT GGGACTGCAG GATGGAGGGG 201 ACAATGATGA TGCAGCAGAG GCCAGTTCTG AGCCAACAGA GAAGGCCCCG 251 AGTGAGGAGG AGCTCCACGG GGACCAGACA GACTTCGGGC AAGGATCCCA GAGTCCCCAG AAGCAGGAGG AGCAGAGGCA GCACCTGCAC CTCATGGTAC AGCTGCTGAG GCCGCAGGAT GACATCCGCC TGGCAGCCCA GCTGGAGGCA CCCCGGCCTC CCCGGCTCCG CTACCTGCTG GTAGTTTCTA CACGAGAAGG AGAAGGTCTG AGCCAGGATG AGACGGTCCT CCTGGGCGTG GATTTCCCTG ACAGCAGCTC CCCCAGCTGC ACCCTGGGCC TGGTCTTGCC CCTCTGGAGT 551 GACACCCAGG TGTACTTAGA TGGAGACGGG GGCTTCAGCG TGACGTCTGG 601 TGGGCAAAGC CGGATCTTCA AGCCCATCTC CATCCAGACC ATGTGGGCCA 651 CACTCCAGGT ATTGCACCAA GCATGTGAGG CAGCTCTAGG CAGCGGCCTT 701 GTACCGGGTG GCAGTGCCCT CACCTGGGCC AGCCACTACC AGGAGAGACT GAACTCCGAA CAGAGCTGCC TCAATGAGTG GACGGCTATG GCCGACCTGG 851 AGTCTCTGCG GCCTCCCAGC GCCGAGCCTG GCGGGTCCTC AGAACAGGAG CAGATGGAGC AGGCGATCCG TGCTGAGCTG TGGAAAGTGT TGGATGTCAG 901 951 TGACCTGGAG AGTGTCACTT CCAAAGAGAT CCGCCAGGCT CTGGAGCTGC 1001 GCCTGGGGCT CCCCCTCCAG CAGTACCGTG ACTTCATCGA CAACCAGATG 1051 CTGCTGCTGG TGGCACAGCG GGACCGAGCC TCCCGCATCT TCCCCCACCT 1101 CTACCTGGGC TCAGAGTGGA ACGCAGCAAA CCTGGAGGAG CTGCAGAGGA 1151 ACAGGGTCAC CCACATCTTG AACATGGCCC GGGAGATTGA CAACTTCTAC 1201 CCTGAGCGCT TCACCTACCA CAATGTGCGC CTCTGGGATG AGGAGTCGGC 1251 CCAGCTGCTG CCGCACTGGA AGGAGACGCA CCGCTTCATT GAGGCTGCAA GAGCACAGGG CACCCACGTG CTGGTCCACT GCAAGATGGG CGTCAGCCGC 1301 TCAGCGGCCA CAGTGCTGGC CTATGCCATG AAGCAGTACG AATGCAGCCT 1351 GGAGCAGGCC CTGCGCCACG TGCAGGAGCT CCGGCCCATC GCCCGCCCCA 1401 ACCCTGGCTT CCTGCGCCAG CTGCAGATCT ACCAGGGCAT CCTGACGGCC AGAACCTGAG GGTGGTGGGG AGGAGAAGGT TGTAGGCATG GAAGAGAGCC 1501 AGGCAGCCCC GAAAGAAGAG CCTGGGCCAC GGCCACGTAT AAACCTCCGA 1551 GGGGTCATGA GGTCCATCAG TCTTCTGGAG CCCTCCTTGG AGCTGGAGAG 1601 CACCTCAGAG ACCAGTGACA TGCCAGAGGT CTTCTCTTCC CACGAGTCTT 1651 CACATGAAGA GCCTCTGCAG CCCTTCCCAC AGCTTGCAAG GACCAAGGGA 1701 GGCCAGCAGG TGGACAGGGG GCCTCAGCCT GCCCTGAAGT CCCGCCAGTC 1751 AGTGGTTACC CTCCAGGGCA GTGCCGTGGT GGCCAACCGG ACCCAGGCCT 1851 TCCAGGAGCA GGAGCAGGGG CAGGGGCAGG GGCAGGGAGA GCCCTGCATT 1901 TCCTCTACGC CCAGGTTCCG GAAGGTGGTG AGACAGGCCA GCGTGCATGA CAGTGGAGAG GAGGGCGAGG CCTGAGCCCT CACACATGCC CACGCTCCCC 1951 TGACACTGAA GAGGATCCAC AACTCCTTGG AGAAACACCC TCACGTCTGT 2001 TGCCGCACAC ATTCCTCTCA GCTCCGCCCC ATACCCGTCA CTACAGCCTC 2101 ACCTCCCACC CCTGTCACTA CGGCCTCACC TCCCACCCCT GTCACTACAG 2151 CCTCACCTCC TACAGCCTTA AGTCCCAGGC CCATGTCTGC CTGTCCAAGG 2201 GCTCAAGACT TTCTAACTGG GATGTGGTAG AGGGACTGAA GGTACCTTTG 2251 GGGGCAACAG CACCCTAGTT TCATTCTCAA CTCTAGCCCT GCACACTCAC 2301 CTGTGGCACG GAATGAAAAC AGAGCTTCCC GTGCAAAAAG GGTCACGCCT 2351 CCCACCCCG CCCCCTCCCT GCACCTCCTG TCCTCTCCA GTTCATTCCT 2401 GGAACCAGCC AGGCCAGGCA ACCAGTGGCC CCCAAAGGCA GGCAGGATCC 2451 TCAGGCCCCA GCCGCGGGAG GCTGGAAGGG CTGGCAGATC GCTTCCCTCA 2501 TCCACCTCCA CCGGTCCAGG TCTTTGCTGC TGTCCCCAGA CCTCCTGTGA CACCACGCCA GATCACAGGG CACCAGGCCA GAGATAGTCT TCTTTTTGTC CTTTCTGGCC TCTGGCTAGT CAGTTTTTCA TAGCCTTACA GTATCTGGCT 2651 2701 AAAA

FEATURES:

5' UTR: 1-93 Start: 94-1506 Stop: 1509 3' UTR: 1510-2704

SPLICE FORM 2: TGGTTGAGGG AAGGGGCCGT GCCCGGTGCC AGCCCAGGTG CTCGCGGCCT GGCTCCATGG CCCTGGTCAC AGTGAGCCGT TCGCCCCCGG GCAGCGGCGC CTCCACGCCC GTGGGGCCCT GGGACCAGGC GGTCCAGCGA AGGAGTCGAC TCCAGCGAAG GCAGAGCTTT GCGGTGCTCC GTGGGGCTGT CCTGGGACTG CAGGATGGAG GGGACAATGA TGATGCAGCA GAGGCCAGTT CTGAGCCAAC AGAGAAGGCC CCGAGTGAGG AGGAGCTCCA CGGGGACCAG ACAGACTTCG GGCAAGGATC CCAGAGTCCC CAGAAGCAGG AGGAGCAGAG GCAGCACCTG CACCTCATGG TACAGCTGCT GAGGCCGCAG GATGACATCC GCCTGGCAGC CCAGCTGGAG GCACCCCGGC CTCCCCGGCT CCGCTACCTG CTGGTAGTTT CTACACGAGA AGGAGAAGGT CTGAGCCAGG ATGAGACGGT CCTCCTGGGC GTGGATTTCC CTGACAGCAG CTCCCCCAGC TGCACCCTGG GCCTGGTCTT 501 551 GCCCCTCTGG AGTGACACCC AGGTGTACTT AGATGGAGAC GGGGGCTTCA GCGTGACGTC TGGTGGGCAA AGCCGGATCT TCAAGCCCAT CTCCATCCAG ACCATGTGGG CCACACTCCA GGTATTGCAC CAAGCATGTG AGGCAGCTCT AGGCAGCGGC CTTGTACCGG GTGGCAGTGC CCTCACCTGG GCCAGCCACT 701 ACCAGGAGAG ACTGAACTCC GAACAGAGCT GCCTCAATGA GTGGACGGCT 751 801 ATGGCCGACC TGGAGTCTCT GCGGCCTCCC AGCGCCGAGC CTGGCGGGTC CTCAGAACAG GAGCAGATGG AGCAGGCGAT CCGTGCTGAG CTGTGGAAAG 851 TGTTGGATGT CAGTGACCTG GAGAGTGTCA CTTCCAAAGA GATCCGCCAG 951 GCTCTGGAGC TGCGCCTGGG GCTCCCCCTC CAGCAGTACC GTGACTTCAT CGACAACCAG ATGCTGCTGC TGGTGGCACA GCGGGACCGA GCCTCCCGCA 1051 TCTTCCCCCA CCTCTACCTG GGCTCAGAGT GGAACGCAGC AAACCTGGAG 1101 GAGCTGCAGA GGAACAGGGT CACCCACATC TTGAACATGG CCCGGGAGAT 1151 TGACAACTTC TACCCTGAGC GCTTCACCTA CCACAATGTG CGCCTCTGGG 1201 ATGAGGAGTC GGCCCAGCTG CTGCCGCACT GGAAGGAGAC GCACCGCTTC ATTGAGGCTG CAAGAGCACA GGGCACCCAC GTGCTGGTCC ACTGCAAGAT 1251 GGGCGTCAGC CGCTCAGCGG CCACAGTGCT GGCCTATGCC ATGAAGCAGT 1301 ACGAATGCAG CCTGGAGCAG GCCCTGCGCC ACGTGCAGGA GCTCCGGCCC ATCGCCCGCC CCAACCCTGG CTTCCTGCGC CAGCTGCAGA TCTACCAGGG 1401 CATCCTGACG GCCAGCCGCC AGAGCCATGT CTGGGAGCAG AAAGTGGGTG 1451 GGGTCTCCCC AGAGGAGCAC CCAGCCCCTG AAGTCTCTAC ACCATTCCCA 1501 CTTCTTCCGC CAGAACCTGA GGGTGGTGGG GAGGAGAAGG TTGTAGGCAT 1551 GGAAGAGAGC CAGGCAGCCC CGAAAGAAGA GCCTGGGCCA CGGCCACGTA 1601 TAAACCTCCG AGGGGTCATG AGGTCCATCA GTCTTCTGGA GCCCTCCTTG 1651 CCACGAGTCT TCACATGAAG AGCCTCTGCA GCCCTTCCCA CAGCTTGCAA 1751 GGACCAAGGG AGGCCAGCAG GTGGACAGGG GGCCTCAGCC TGCCCTGAAG 1801 TCCCGCCAGT CAGTGGTTAC CCTCCAGGGC AGTGCCGTGG TGGCCAACCG 1851 GACCCAGGCC TTCCAGGAGC AGGAGCAGGG GCAGGGGCAG GGGCAGGGAG AGCCCTGCAT TTCCTCTACG CCCAGGTTCC GGAAGGTGGT GAGACAGGCC AGCGTGCATG ACAGTGGAGA GGAGGGCGAG GCCTGAGCCC TCACACATGC 2001 CCACGCTCCC CTGACACTGA AGAGGATCCA CAACTCCTTG GAGAAACACC 2051 2101 CTCACGTCTG TTGCCGCACA CATTCCTCTC AGCTCCGCCC CATACCCGTC 2151 ACTACAGCCT CACCTCCCAC CCCTGTCACT ACGGCCTCAC CTCCCACCCC 2201 TGTCACTACA GCCTCACCTC CTACAGCCTT AAGTCCCAGG CCCATGTCTG 2251 CCTGTCCAAG GGCTCAAGAC TTTCTAACTG GGATGTGGTA GAGGGACTGA 2301 AGGTACCTTT GGGGGCAACA GCACCCTAGT TTCATTCTCA ACTCTAGCCC TGCACACTCA CCTGTGGCAC GGAATGAAAA CAGAGCTTCC CGTGCAAAAA GGGTCACGCC TCCCACCCCC GCCCCCTCCC TGCACCTCCT GTCCTCTCCC AGTTCATTCC TGGAACCAGC CAGGCCAGGC AACCAGTGGC CCCCAAAGGC AGGCAGGATC CTCAGGCCCC AGCCGCGGGA GGCTGGAAGG GCTGGCAGAT CGCTTCCCTC ATCCACCTCC ACCGGTCCAG GTCTTTGCTG CTGTCCCCAG ACCTCCTGTG ACACCACGCC AGATCACAGG GCACCAGGCC AGAGATAGTC 2601 TTCTTTTTGT CCTTTCTGGC CTCTGGCTAG TCAGTTTTTC ATAGCCTTAC 2651 2701 2751 ΑΑΑΑΑΑΑΑ ΑΑΑΑΑΑΑΑ ΑΑΑΑΑΑΑΑΑ ΑΑΑΑΑΑΑΑΑ 2801 2851

FEATURES:

5' UTR: 1-56 Start: 57 Stop: 2034 3' UTR: 2037-2852

SPLICE FORM 3:

CCTGGTCCTG CGGGTCCAGG ACTGTCCCGC GGGGTTGAGG GAAGGGGCCG TGCCCGGTGC CAGCCCAGGT GCTCGCGGCC TGGCTCCATG GCCCTGGTCA 101 CAGTGAGCCG TTCGCCCCCG GGCAGCGGCG CCTCCACGCC CGTGGGGCCC TGGGACCAGG CGGTCCAGCG AAGGAGTCGA CTCCAGCGAA GGCAGAGCTT TGCGGTGCTC CGTGGGGCTG TCCTGGGACT GCAGGATGGA GGGGACAATG ATGATGCAGC AGAGGCCAGT TCTGAGCCAA CAGAGAAGGC CCCGAGTGAG GAGGAGCTCC ACGGGGACCA GACAGACTTC GGGCAAGGAT CCCAGAGTCC CCAGAAGCAG GAGGAGCAGA GGCAGCACCT GCACCTCATG GTACAGCTGC 351 TGAGGCCGCA GGATGACATC CGCCTGGCAG CCCAGCTGGA GGCACCCCGG 401 451 CCTCCCGGC TCCGCTACCT GCTGGTAGTT TCTACACGAG AAGGAGAAGG 501 TCTGAGCCAG GATGAGACGG TCCTCCTGGG CGTGGATTTC CCTGACAGCA 551 GCTCCCCCAG CTGCACCCTG GGCCTGGTCT TGCCCCTCTG GAGTGACACC 601 CAGGTGTACT TAGATGGAGA CGGGGGCTTC AGCGTGACGT CTGGTGGGCA 651 AAGCCGGATC TTCAAGCCCA TCTCCATCCA GACCATGTGG TCCTCAGAAC 701 AGGAGCAGAT GGAGCAGGCG ATCCGTGCTG AGCTGTGGAA AGTGTTGGAT 751 GTCAGTGACC TGGAGAGTGT CACTTCCAAA GAGATCCGCC AGGCTCTGGA 801 GCTGCGCCTG GGGCTCCCCC TCCAGCAGTA CCGTGACTTC ATCGACAACC 851 AGATGCTGCT GCTGGTGGCA CAGCGGGACC GAGCCTCCCG CATCTTCCCC 901 CACCTCTACC TGGGCTCAGA GTGGAACGCA GCAAACCTGG AGGAGCTGCA GAGGAACAGG GTCACCCACA TCTTGAACAT GGCCCGGGAG ATTGACAACT TCTACCCTGA GCGCTTCACC TACCACAATG TGCGCCTCTG GGATGAGGAG 1001 TCGGCCCAGC TGCTGCCGCA CTGGAAGGAG ACGCACCGCT TCATTGAGGC 1051 TGCAAGAGCA CAGGGCACCC ACGTGCTGGT CCACTGCAAG ATGGGCGTCA 1101 1151 GCCGCTCAGC GGCCACAGTG CTGGCCTATG CCATGAAGCA GTACGAATGC 1201 AGCCTGGAGC AGGCCCTGCG CCACGTGCAG GAGCTCCGGC CCATCGCCCG 1251 CCCCAACCT GGCTTCCTGC GCCAGCTGCA GATCTACCAG GGCATCCTGA 1301 CGGCCAGAAC CTGAGGGTGG TGGGGAGGAG AAGGTTGTAG GCATGGAAGA 1351 GAGCCAGGCA GCCCCGAAAG AAGAGCCTGG GGCCACGGGG CACGTATAAA 1401 CCTCCGAGGG GTCATGAGGT CCATCAGTCT TCTGGAGCCC TCCTTGGGAG 1451 CTGGAGAGCA CCTCAGTAGA CCAGTGACAT GCCAGAGGTC TTCTCTTCCC 1501 ACGAGTCTTC ACATGAAGAG CCTCTGCAGC CCTTCCCACA GCTTGCAAGG 1551 ACCAAGGAG GCCAGCAGGT GGACAGGGGG CCTCAGCCTG CCCTGAAGTC CCGCCAGTCA GTGGTTACCC TCCAGGGCAG TGCCGTGGTG GCCAACCGGA CCCAGGCCTT CCAGGAGCAG GAGCAGGGGC AGGGGCAGGG GCAGGGAGAG 1651 1701 CCCTGCATTT CCTCTACGCC CAGGTTCCGG AAGGTGGTGA GACAGGCCAG 1751 CGTGCATGAC AGTGGAGAGG AGGGCGAGGC CTGAGCCCTC ACACATGCCC 1801 ACGCTCCCCT GACACTGAAG AGGATCCACA ACTCCTTGGA GAAACACCCT 1851 CACGTCTGTT GCCGCACACA TTCCTCTCAG CTCCGCCCCA TACCCGTCAC 1901 TACAGCCTCA CCTCCCACCC CTGTCACTAC GGCCTCACCT CCCACCCCTG 1951 TCACTACAGC CTCACCTCCT ACAGCCTTAA GTCCCAGGCC CATGTCTGCC 2001 TGTCCAAGGG CTCAAGACTT TCTAACTGGG ATGTGGTAGA GGGACTGAAG 2051 GTACCTTTGG GGGCAACAGC ACCCTAGTTT CATTCTCAAC TCTAGCCCTG 2101 CACACTCACC TGTGGCACGG AATGAAAACA GAGCTTCCCG TGCAAAAAGG GTCACGCCTC CCACCCCGC CCCCTCCCTG CACCTCCTGT CCTCTCCCAG TTCATTCCTG GAACCAGCCA GGCCAGGCAA CCAGTGGCCC CCAAAGGCAG GCAGGATCCT CAGGCCCCAG CCGCGGGAGG CTGGAAGGGC TGGCAGATCG 2251 CTTCCCTCAT CCACCTCCAC CGGTCCAGGT CTTTGCTGCT GTCCCCAGAC 2301 CTCCTGTGAC ACCACGCCAG ATCACAGGGC ACCAGGCCAG AGATAGTCTT 2351 CTTTTTGTCC TTTCTGGCCT CTGGCTAGTC AGTTTTTCAT AGCCTTACAG 2401 TATCTGGCTT TGTACTGAGA AATAAAACAC ATTTTCATAT TTGGTTAAAA

FEATURES:

5' UTR: 1-88 Start: 88 Stop: 1311 3' UTR: 1315-2540

Homologous proteins:

Top 10 BLAST Hits	Score	E
SPLICE FORM 1:		- 163
gi 8923483 ref NP_060327.1 hypothetical protein FLJ20515 >gi 7	576 337	e-163 2e-91
gi 6714641 dbj BAA89534.1 (AB036834) MAP kinase phosphatase [D gi 8922777 ref NP_060746.1 hypothetical protein FLJ10928 >gi 7	233	3e-60
gi 8922777 ref NP_060746.1 hypothetical plotein rho10320 3gi 7 gi 7242951 dbj BAA92536.1 (AB037719) KIAA1298 protein [Homo sa	143	4e-33
gi 7301242 gb AAF56372.1 (AE003750) CG6238 gene product [Droso	124	2e-27
gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis	113	5e-24
gi 9294518 dbi BAB02780.1 (AB023036) dual-specificity protein	113	5e-24
gi 6862915 gb AAF30304.1 AC018907 4 (AC018907) putative dual-sp	94	2e-18
gi 6015037 sp 054838 DUS5_RAT_DUAL_SPECIFICITY_PROTEIN_PHOSPHAT	92	9e-18
gi 9910432 ref NP_064570.1 mitogen-activated protein kinase ph	90	3e-17
SPLICE FORM 2:	57.6	1.60
gi 8923483 ref NP_060327.1 hypothetical protein FLJ20515 [Homo	576	e-163
gi 6714641 dbj BAA89534.1 (AB036834) MAP kinase phosphatase [D	340 229	6e-92 1e-58
gi 8922777 ref NP_060746.1 hypothetical protein FLJ10928 [Homo gi 7242951 dbi BAA92536.1 (AB037719) KIAA1298 protein [Homo sa	162	1e-38
gi 7242951 dbj BAA92536.1 (AB037719) KIAA1298 protein [Homo sa gi 9294518 dbj BAB02780.1 (AB023036) dual-specificity protein	113	8e-24
gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis	113	8e-24
gi 4758212 ref NP 004411.1 dual specificity phosphatase 8 [Hom	99	3e-19
gi 6679156 ref NP 032774.1 neuronal tyrosine/threonine phospha	96	2e-18
gi 6862915 gb AAF30304.1 AC018907 4 (AC018907) putative dual-sp	94	6e-18
gi 6015037 sp 054838 DUS5_RAT DUAL SPECIFICITY PROTEIN PHOSPHAT	92	2e-17
SPLICE FORM 3:		
gi 8923483 ref NP_060327.1 hypothetical protein FLJ20515 [Homo	410	e-113
gi 8922777 ref NP_060746.1 hypothetical protein FLJ10928 [Homo	233	7e-60
gi 6714641 dbj BAA89534.1 (AB036834) MAP kinase phosphatase [D	224	5e-57 5e-33
gi 7242951 dbj BAA92536.1 (AB037719) KIAA1298 protein [Homo sa	143 113	1e-23
gi 9294518 dbj BAB02780.1 (AB023036) dual-specificity protein gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis	113	1e-23
gi 4150963 emb CAA77232.1 (Y18620) DsPTP1 protein [Arabidopsis gi 6862915 gb AAF30304.1 AC018907_4 (AC018907) putative dual-sp	94	5e-18
gi 6015037 sp 054838 DUS5 RAT DUAL SPECIFICITY PROTEIN PHOSPHAT	92	2e-17
gi 9910432 ref NP 064570.1 mitogen-activated protein kinase ph	90	7e-17
gi 9911130 gb AAA64693.2 (U15932) protein phosphatase [Homo sa	90	1e-16
77.707.4 77.707		
BLAST to dbEST: SPLICE FORM 1:		
SILLOR FORT I.	Score	E
gi 9807071 /dataset=dbest /taxon=960	1404	0.0
gi 10317998 /dataset=dbest /taxon=96	1316	0.0
gi 10151079 /dataset=dbest /taxon=96	1249	0.0
gi 10401153 /dataset=dbest /taxon=960	1180	0.0
gi 10329921 /dataset=dbest /taxon=96	1124	0.0
gi 7632969 /dataset=dbest /taxon=960	79 1 779	0.0
gi 9155111 /dataset=dbest /taxon=9606 gi 10994242 /dataset=dbest /taxon=96	450	e-124
gi iuyy4242 /dataset=dbest /taxon=yo	-30	Q 121

EXPRESSION INFORMATION FOR MODULATORY USE: SPLICE FORM 1: library source: Expression information from BLAST dbEST hits: Human Pancreas gi|9807071 gi|10317998 Human colon adenocarcinoma gi|10151079 Human Pancreas:adenocarcinoma gi|10401153 Human Pancreas:epitheliod carcinoma gi|10329921 Human lung: large cell carcinoma gi|7632969 Human kidney: renal cell carcinoma gi|9155111 Human Placenta choriocarcinoma gi|10994242 Human ovary tumor tissue Expression information from PCR-based tissue screening panels: Human Brain Human Fetal brain Human fetal heart Human fetal kidney Human heart Human kidney Human uterus Human thyroid

10 t **gg** 417

SPLICE FORM 1:

- 1 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGLQD
 51 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHLHL
 101 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLGVD
 151 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIQTM
 201 WATLQVLHQA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTAMA
 251 DLESLRPPSA EPGGSSEQEQ MEQAIRAELW KVLDVSDLES VTSKEIRQAL
 301 ELRLGLPLQQ YRDFIDNQML LLVAQRDRAS RIFPHLYLGS EWNAANLEEL
 351 QRNRVTHILN MAREIDNFYP ERFTYHNVRL WDEESAQLLP HWKETHRFIE

451 RPNPGFLRQL QIYQGILTAR T

SPLICE FORM 2:

- 1MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQD51GGDNDDAAEASSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHL101MVQLLRPQDDIRLAAQLEAPRPPRLRYLLVVSTREGEGLSQDETVLLGVD151FPDSSSPSCTLGLVLPLWSDTQVYLDGDGGFSVTSGGQSRIFKPISIQTM201WATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQSCLNEWTAMA251DLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLDVSDLESVTSKEIRQAL301ELRLGLPLQQYRDFIDNQMLLLVAQRDRASRIFPHLYLGSEWNAANLEEL351QRNRVTHILNMAREIDNFYPERFTYHNVRLWDEESAQLLPHWKETHRFIE401AARAQGTHVLVHCKMGVSRSAATVLAYAMKQYECSLEQALRHVQELRPIA451RPNPGFLRQLQIYQGILTASRQSHVWEQKVGGVSPEEHPAPEVSTPFPLL501PPEPEGGGEEKVVGMEESQAAPKEEPGPRPRINLRGVMRSISLLEPSLEL551ESTSETSDMPEVFSSHESSHEEPLQPFPQLARTKGGQQVDRGPQPALKSR
- 601 QSVVTLQGSA VVANRTQAFQ EQEQGQGQGQ GEPCISSTPR FRKVVRQASV
- 651 HDSGEEGEA

SPLICE FORM 3:

- 1 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGLQD
 51 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHLHL
 101 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLGVD
 151 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIQTM
 201 WSSEQEQMEQ AIRAELWKVL DVSDLESVTS KEIRQALELR LGLPLQQYRD
 251 FIDNQMLLLV AQRDRASRIF PHLYLGSEWN AANLEELQRN RVTHILNMAR
 301 EIDNFYPERF TYHNVRLWDE ESAQLLPHWK ETHRFIEAAR AQGTHVLVHC
 351 KMGVSRSAAT VLAYAMKQYE CSLEQALRHV QELRPIARPN PGFLRQLQIY
- 401 QGILTART

FEATURES:

Functional domains and key regions: SPLICE FORM 1:

[1] PDOC00004 PS00004 CAMP_PHOSPHO_SITE

cAMP- and cGMP-dependent protein kinase phosphorylation site

34-37 RRQS

[2] PDOC00005 PS00005 PKC_PHOSPHO_SITE Protein kinase C phosphorylation site

Number of matches: 6

- 1 65-67 TEK
- 2 132-134 STR
- 3 254-256 SLR
- 4 292-294 TSK
- 5 395-397 THR
- 6 468-470 TAR

[3] PDOC00006 PS00006 CK2_PHOSPHO_SITE Casein kinase II phosphorylation site

```
Number of matches: 6
1 70-73 SEEE
2 132-135 STRE
3 140-143 SQDE
4 266-269 SEQE
5 286-289 SDLE
6 292-295 TSKE
```

[4] PDOC00007 PS00007 TYR_PHOSPHO_SITE Tyrosine kinase phosphorylation site

363-369 REIDNFY

[5] PDOC00008 PS00008 MYRISTYL
N-myristoylation site

Number of	matches:	8
1	12-17	GSGAST
2	43-48	GAVLGL
3	47-52	GLQDGG
4	218-223	GLVPGG
5	223-228	GSALTW
6	339-344	GSEWNA
7	416-421	GVSRSA
8	465-470	GILTAR

```
BLAST Alignment to Top Hit:
SPLICE FORM 1:
>gi|8923483|ref|NP 060327.1| hypothetical protein FLJ20515
          >gi|7020674|dbj|BAA91228.1| (AK000522) unnamed protein
          product [Homo sapiens]
          Length = 394
 Score = 576 bits (1469), Expect = e-163
 Identities = 290/312 (92%), Positives = 296/312 (93%), Gaps = 1/312 (0%)
          MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEA 60
Query: 1
          {\tt MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEA}
          MALVTVSRSPPGSGASTPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAEA 60
Sbjct: 1
Query: 61 SSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAP 120
           SSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAP
Sbjct: 61 SSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEAP 120
Query: 121 RPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVLPLWSDTQVYLDGDGG 180
           {\tt RPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVLPLWSDTQVYLDGDGG}
Sbjct: 121 RPPRLRYLLVVSTREGEGLSQDETVLLGVDFPDSSSPSCTLGLVLPLWSDTQVYLDGDGG 180
Query: 181 FSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQ 240
           FSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQ
Sbjct: 181 FSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQERLNSEQ 240
Query: 241 SCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLDV-SDLESVTSKEIRQA 299
           SCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVL++ S E+ E+ +
Sbjct: 241 SCLNEWTAMADLESLRPPSAEPGGSSEQEQMEQAIRAELWKVLELESTSETSDMPEVFSS 300
Query: 300 LELRLGLPLQQY 311
                 PLQ +
Sbjct: 301 HESSHEEPLQPF 312
>qi|6714641|dbj|BAA89534.1| (AB036834) MAP kinase phosphatase
           [Drosophila melanogaster]
           Length = 1045
  Score = 337 \text{ bits } (854), \text{ Expect} = 2e-91
  Identities = 204/537 (37%), Positives = 284/537 (51%), Gaps = 81/537 (15%)
          MALVTVSRSPPGSGA-STPVGPWDQAVQRRSRLQRRQSFAVLRGAVLGLQDGGDNDDAAE 59
 Query: 1
                                            R + F + G L L
           MALVTV RSP +G+ S G +
           MALVTVQRSPSVAGSCSNSDGESEDDEGNSKGNDRSECFFAGKGTALVL----- 49
 Sbjct: 1
 Query: 60 ASSEPTEKAPSEEELHGDQTDFGQGSQSPQKQEEQRQHLHLMVQLLRPQDDIRLAAQLEA 119
                                           + + HL M LL+ +D +++A +LE+
           A + SE L D T +QS
 Sbjct: 50 ALKDIPPLTQSERRLSTDSTRSSNSTQS--NNSDIQLHLQSMFYLLQREDTLKMAVKLES 107
 Query: 120 PRPPRLRYLLV------VSTREGEGLSQDETVLLGVDFPDSSSPS------ 158
                         S R + + +V +G
            R R RYL++
 Sbjct: 108 QRSNRTRYLVIASRSCCRSGTSDRRRHRIMRHHSVKVGGSAGTKSSTSPAVPTQRQLSVE 167
                               -----VLPLWSDTQVY 174
 Query: 159 -----
                                                          V+P+ +DT ++
                                             C LG+
 Sbjct: 168 QTATEASSKCDKTADKENATAAGDNKNTSGMEESCLLGIDCNERTTIGLVVPILADTTIH 227
 Query: 175 LDGDGGFSVTSGGQSRIFKPISIQTMWATLQVLHQACEAALGSGLVPGGSALTWASHYQE 234
                       ++ IFKP+S+Q MW+ LQ LH+ + A +
                                                          G + WSY+
            LDGDGGFSV
 Sbjct: 228 LDGDGGFSVKVYEKTHIFKPVSVQAMWSALQTLHKVSKKARENNFYASGPSHDWLSSYER 287
```

Query: 235 RLNSEQSCLNEWTAMADLESLRPPSAEP--GGSSEQEQMEQAIRAELWKVLDVSDLESVT 292 R+ S+QSCLNEW AM LES RPPS + E+E+ E I+ +L ++ Sbjct: 288 RIESDQSCLNEWNAMDALESRRPPSPDAIRNKPPEKEETESVIKMKLKAIMMSVDLDEVT 347 Query: 293 SKEIRQALELRLGLPLQQYRDFIDNQMLLLVAQRDRASRIFPHLYLGSEWNAANLEELQR 352 SK IR LE L + L +Y+ FID +ML+++ Q D ++IF H+YLGSEWNA+NLEELQ+ Sbjct: 348 SKYIRGRLEEILDMDLGEYKSFIDAEMLVILGQMDAPTKIFEHVYLGSEWNASNLEELQK 407 Query: 353 NRVTHILNMAREIDNFYPERFTYHNVRLWDEESAQLLPHWKETHRFIEAARAQGTHVLVH 412 N V HILN+ REIDNF+P F Y NVR++D+E LL +W +T R+I A+A+G+ VLVH Sbjct: 408 NGVRHILNVTREIDNFFPGTFEYFNVRVYDDEKTNLLKYWDDTFRYITRAKAEGSKVLVH 467 Query: 413 CKMGVSRSAATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQIYQGILTA 469 +QAL HV++ R +PN FL QL+ Y G+L A CKMGVSRSA+ V+AYAMK Y+ Sbjct: 468 CKMGVSRSASVVIAYAMKAYQWEFQQALEHVKKRRSCIKPNKNFLNQLETYSGMLDA 524 >gi|8922777|ref|NP_060746.1| hypothetical protein FLJ10928 >gi|7023283|dbj|BAA91913.1| (AK001790) unnamed protein product [Homo sapiens] Length = 141Score = 233 bits (588), Expect = 3e-60 Identities = 111/111 (100%), Positives = 111/111 (100%) Query: 361 MAREIDNFYPERFTYHNVRLWDEESAQLLPHWKETHRFIEAARAQGTHVLVHCKMGVSRS 420 MAREIDNFYPERFTYHNVRLWDEESAQLLPHWKETHRFIEAARAQGTHVLVHCKMGVSRS Sbjct: 31 MAREIDNFYPERFTYHNVRLWDEESAQLLPHWKETHRFIEAARAQGTHVLVHCKMGVSRS 90 Query: 421 AATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQIYQGILTART 471 AATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQIYQGILTART Sbjct: 91 AATVLAYAMKQYECSLEQALRHVQELRPIARPNPGFLRQLQIYQGILTART 141

	CGTCCTTCCT	GGTCCTGCGG	GTCCAGGACT	GTCCGCGGGG	TTGAGGGAAG
				GCGGCCTGGC	
101				GCGGCGCCTC	
				AGTCGACTCC	
				GGGACTGCAG	
				AGCCAACAGA	
				GACTTCGGGC	
				GCACCTGCAC	
				TGGCAGCCCA	
				GTAGTTTCTA	
				CCTGGGCGTG	
				TGGTCTTGCC	
601	GACACCCAGG	TGTACTTAGA	TGGAGACGGG	GGCTTCAGCG	TGACGTCTGG
651				CATCCAGACC	
				CAGCTCTAGG	
				AGCCACTACC	
				GACGGCTATG	
				GCGGGTCCTC	
901				TGGAAAGTGT	
951	TGACCTGGAG	AGTGTCACTT	CCAAAGAGAT	CCGCCAGGCT	CTGGAGCTGC
1001				ACTTCATCGA	
1051				TCCCGCATCT	
				CCTGGAGGAG	
				GGGAGATTGA	
				CTCTGGGATG	
1251	CCAGCTGCTG	CCGCACTGGA	AGGAGACGCA	CCGCTTCATT	GAGGCTGCAA
1301				GCAAGATGGG	
1351	TCAGCGGCCA	CAGTGCTGGC	CTATGCCATG	AAGCAGTACG	AATGCAGCCT
1401			TGCAGGAGCT		GCCCGCCCCA
1451	ACCCTGGCTT	CCTGCGCCAG	CTGCAGATCT	ACCAGGGCAT	CCTGACGGCC
1501	AGAACCTGAG	GGTGGTGGGG	AGGAGAAGGT	TGTAGGCATG	GAAGAGAGCC
1551	AGGCAGCCCC	GAAAGAAGAG	CCTGGGCCAC	GGCCACGTAT	AAACCTCCGA
1601	GGGGTCATGA	GGTCCATCAG	TCTTCTGGAG	CCCTCCTTGG	AGCTGGAGAG
			TGCCAGAGGT		CACGAGTCTT
1701	CACATGAAGA	GCCTCTGCAG	CCCTTCCCAC	AGCTTGCAAG	GACCAAGGGA
1751	GGCCAGCAGG	TGGACAGGGG	GCCTCAGCCT	GCCCTGAAGT	CCCGCCAGTC
1801	AGTGGTTACC	CTCCAGGGCA	GTGCCGTGGT	GGCCAACCGG	ACCCAGGCCT
1851	TCCAGGAGCA	GGAGCAGGGG	CAGGGGCAGG	GGCAGGGAGA	GCCCTGCATT
1901				AGACAGGCCA	GCGTGCATGA
1951	CAGTGGAGAG	GAGGGCGAGG	CCTGAGCCCT	CACACATGCC	CACGCTCCCC
2001	TGACACTGAA	GAGGATCCAC	AACTCCTTGG	AGAAACACCC	TCACGTCTGT
2051	TGCCGCACAC	ATTCCTCTCA	GCTCCGCCCC	ATACCCGTCA	CTACAGCCTC
	ACCTCCCACC			TCCCACCCCT	GTCACTACAG
2151	CCTCACCTCC	TACAGCCTTA	AGTCCCAGGC	CCATGTCTGC	CTGTCCAAGG
2201	GCTCAAGACT	TTCTAACTGG	GATGTGGTAG	AGGGACTGAA	GGTACCTTTG
2251	GGGGCAACAG	CACCCTAGTT	TCATTCTCAA	CTCTAGCCCT	GCACACTCAC
2301	CTGTGGCACG	GAATGAAAAC	AGAGCTTCCC	GTGCAAAAAG	GGTCACGCCT
					GTTCATTCCT
					GGCAGGATCC
2451	TCAGGCCCCA	GCCGCGGGAC	GCTGGAAGGG	CTGGCAGATC	GCTTCCCTCA
2501	TCCACCTCCA	CCGGTCCAGG	TCTTTGCTGC	TGTCCCCAGA	CCTCCTGTGA
					TCTTTTTGTC
2601	СТТТСТСССС	TCTGGCTAGT	CAGTTTTTC	TAGCCTTACA	GTATCTGGCT
2651	TTGTACTGAG	AAATAAAACA	CATTTTCATA	AAAAAAAAA	AAAAAAAA
	AAAA				
2,01					

FEATURES:

Start: 94 Exon: 94-1506 Stop: 1507

CHROMOSOME MAP POSITION:

Bac accession number: AP001885

Chromosome #: 11

ALLELIC VARIANTS (SNPs):

DNA				Protein			
Position	Major	Minor	Domain	Position	Major	Minor	
577	G	A	Exon	162	G	S	
1451	G	A	Exon	453	S	N	
2641	G	A	Beyond ORF(3')				

Context:

DNA

Position

577

1451 ACAGGGTCACCCACATCTTGAACATGGCCCGGGAGATTGACAACTTCTACCCTGAGCGCT
TCACCTACCACAATGTGCGCCTCTGGGATGAGGAGTCGGCCCAGCTGCTGCCGCACTGGA
AGGAGACGCACCGCTTCATTGAGGCTGCAAGAGCACAGGGCACCCACGTGCTGGTCCACT
GCAAGATGGGCGTCAGCCGCTCAGCGGCCACAGTGCTGGCCTATGCCATGAAGCAGTACG
AATGCAGCCTGGAGCAGGCCCTGCGCCACGTGCAGGAGCTCCGGCCCATCGCCCCCCA
[G, A]

CCCTGGCTTCCTGCGCCAGCTGCAGATCTACCAGGGCATCCTGACGGCCAGAACCTGAGG GTGGTGGGGAGAGAAGGTTGTAGGCATGGAAGAGGAGCCAGGCAGCCCCGAAAGAAGAG CTGGGCCACGGCCACGTATAAACCTCCGAGGGGTCATGAGGTCCATCAGTCTTCTGGAGC CCTCCTTGGAGCTGGAGAGCACCTCAGAGACCAGTGACATGCCAGAGGTCTTCTCTTCCC ACGAGTCTTCACATGAAGAGCCTCTGCAGCCCTTCCCACAGCTTGCAAGGACCAAGGGAG

GENE STRUCTURE MODEL:

SPLICE FORM 2	5'-e1-e2-e3-e4-e5-e6-e7-e8-e9-e10-e11-e12-e13-e14-3'
SPLICE FORM 1	5'-e1-e2-e3-e4-e5-e6-e7-e8-e9-e10-e11-e123'
SPLICE FORM 3	5'-e1-e2-e3-e4-e5-e6e8-e9-e10-e11-e123'

MULTIPLE ALIGNMENT OF CDNA SEQUENCES:

SPLICE	FORM	2	~~~~~~~	~~~~~~~	~~~~~~	~~~~~'I'G	GTTGAGGGAA
SPLICE	FORM	1	CGTCCTTCCT	GGTCCTGCGG	GTCCAGGACT	GT.CCGCGGG	GTTGAGGGAA
SPLICE	FORM	3	~~~~~CCT	GGTCCTGCGG	GTCCAGGACT	GTCCCGCGGG	GTTGAGGGAA

10

SPLICE FORM 2 GGGGCCGTGC CCGGTGCCAG CCCAGGTGCT CGCGGCCTGG CTCCATGGCC

SPLICE SPLICE	FORM FORM	1	GGGGCCGTGC GGGGCCGTGC	CCGGTGCCAG CCGGTGCCAG	CCCAGGTGCT CCCAGGTGCT	CGCGGCCTGG CGCGGCCTGG	CTCCATGGCC CTCCATGGCC
SPLICE	FORM	1	CTGGTCACAG	TGAGCCGTTC	GCCCCCGGGC GCCCCCGGGC	AGCGGCGCCT	CCACGCCCGT
SPLICE	FORM	1	GGGGCCCTGG	GACCAGGCGG	TCCAGCGAAG TCCAGCGAAG TCCAGCGAAG	GAGTCGACTC	CAGCGAAGGC
SPLICE	FORM	1	AGAGCTTTGC	GGTGCTCCGT	GGGGCTGTCC GGGGCTGTCC	TGGGACTGCA	GGATGGAGGG
SPLICE	FORM	1	GACAATGATG	ATGCAGCAGA	GGCCAGTTCT GGCCAGTTCT	GAGCCAACAG	AGAAGGCCCC
SPLICE	FORM	1	GAGTGAGGAG	GAGCTCCACG	GGGACCAGAC GGGACCAGAC GGGACCAGAC	AGACTTCGGG	CAAGGATCCC
SPLICE	FORM	1	AGAGTCCCCA	GAAGCAGGAG	GAGCAGAGGC GAGCAGAGGC GAGCAGAGGC	AGCACCTGCA	CCTCATGGTA
SPLICE	FORM	1	CAGCTGCTGA	GGCCGCAGGA	TGACATCCGC TGACATCCGC	CTGGCAGCCC	AGCTGGAGGC
SPLICE	FORM	1	ACCCCGGCCT	CCCCGGCTCC	GCTACCTGCT GCTACCTGCT GCTACCTGCT	GGTAGTTTCT	ACACGAGAAG
SPLICE	FORM	1	GAGAAGGTCT	GAGCCAGGAT	GAGACGGTCC GAGACGGTCC	TCCTGGGCGT	550 GGATTTCCCT GGATTTCCCT
SPLICE	FORM	1	GACAGCAGCT	CCCCCAGCT	CACCCTGGGC	CTGGTCTTGC	600 CCCTCTGGAG CCCTCTGGAG
SPLICE	FORM	1 1	TGACACCCAG	GTGTACTTAC	G ATGGAGACGG	GGGCTTCAGC	650 GTGACGTCTG GTGACGTCTG
SPLICE	E FORM	1 1	. GTGGGCAAAG	CCGGATCTT	C AAGCCCATCT C AAGCCCATCT C AAGCCCATCT	CCATCCAGAC	700 CATGTGGGCC CATGTGGGCC

			701				750
SPLICE	FORM	2 1	ACACTCCAGG ACACTCCAGG	TATTGCACCA	AGCATGTGAG AGCATGTGAG	GCAGCTCTAG GCAGCTCTAG	GCAGCGGCCT
SPLICE	FORM	3	• • • • • • • • • • • • • • • • • • • •			• • • • • • • • •	
SPLICE SPLICE	FORM FORM	1	TGTACCGGGT	GGCAGTGCCC	TCACCTGGGC TCACCTGGGC	CAGCCACTAC	CAGGAGAGAC
SPLICE	FORM	3			• • • • • • • • • • • • • • • • • • • •		• • • • • • • • •
SPLICE	FORM	1	TGAACTCCGA	ACAGAGCTGC	CTCAATGAGT CTCAATGAGT	GGACGGCTAT	850 GGCCGACCTG GGCCGACCTG
SPLICE	FORM	1	851 GAGTCTCTGC GAGTCTCTGC	GGCCTCCCAG	CGCCGAGCCT CGCCGAGCCT	GGCGGGTCCT	CAGAACAGGA
SPLICE	FORM	1	GCAGATGGAG	CAGGCGATCC	GTGCTGAGCT GTGCTGAGCT GTGCTGAGCT	GTGGAAAGTG	TTGGATGTCA
SPLICE	FORM	1	GTGACCTGGA	GAGTGTCACT	TCCAAAGAGA TCCAAAGAGA TCCAAAGAGA	TCCGCCAGGC	TCTGGAGCTG
SPLICE	FORM	1	CGCCTGGGGC	TCCCCCTCCA	GCAGTACCGT GCAGTACCGT GCAGTACCGT	GACTTCATCG	ACAACCAGAT
SPLICE	FORM	1	GCTGCTGCTG	GTGGCACAGC	GGGACCGAGC GGGACCGAGC GGGACCGAGC	CTCCCGCATC	TTCCCCCACC
SPLICE SPLICE SPLICE	FORM	1	TCTACCTGGG	CTCAGAGTGG	AACGCAGCAA AACGCAGCAA AACGCAGCAA	ACCTGGAGGA	1150 GCTGCAGAGG GCTGCAGAGG GCTGCAGAGG
SPLICE	FORM	1	AACAGGGTCA	A CCCACATCT	r GAACATGGCC	CGGGAGATTG	1200 ACAACTTCTA ACAACTTCTA ACAACTTCTA
SPLICE	FORM	1 1	CCCTGAGCG	C TTCACCTAC	C ACAATGTGCC	CCTCTGGGAT	1250 GAGGAGTCGG GAGGAGTCGG GAGGAGTCGG
SPLICE	FORM	1 1	. CCCAGCTGC	T GCCGCACTG	G AAGGAGACG	C ACCGCTTCAT	1300 TGAGGCTGCA TGAGGCTGCA TGAGGCTGCA
SPLICI SPLICI	E FORM	4 2 4 1	1301 2 AGAGCACAG L AGAGCACAG	G GCACCCACG G GCACCCACG	T GCTGGTCCA T GCTGGTCCA	C TGCAAGATGO C TGCAAGATGO	1350 G GCGTCAGCCG G GCGTCAGCCG

SPLICE	FORM	3	AGAGCACAGG	GCACCCACGT	GCTGGTCCAC	TGCAAGATGG	GCGTCAGCCG
SPLICE	FORM	1	CTCAGCGGCC	ACAGTGCTGG	CCTATGCCAT CCTATGCCAT CCTATGCCAT	GAAGCAGTAC	GAATGCAGCC
SPLICE	FORM	1	TGGAGCAGGC	CCTGCGCCAC	GTGCAGGAGC GTGCAGGAGC GTGCAGGAGC	TCCGGCCCAT	CGCCCGCCCC
SPLICE	FORM	1	AACCCTGGCT	TCCTGCGCCA	GCTGCAGATC GCTGCAGATC GCTGCAGATC	TACCAGGGCA	TCCTGACG
SPLICE SPLICE SPLICE	FORM	1		AGCCATGTCT	GGGAGCAGAA		1550 GTCTCCCCAG
SPLICE SPLICE SPLICE	FORM	1	1551 AGGAGCACCC	AGCCCCTGAA	GTCTCTACAC	CATTCCCACT	1600 TCTTCCGCCA GCCA
SPLICE	FORM	1	GAACCTGAGG	GTGGTGGGGA	GGAGAAGGTT GGAGAAGGTT GGAGAAGGTT	GTAGGCATGG	AAGAGAGCCA
SPLICE	FORM	1	GGCAGCCCCG	AAAGAAGAGC	CTGGGCCA CTGGGCCA CTGGGGCCAC	CGGCCACGTA	TAAACCTCCG
SPLICE	FORM	1	AGGGGTCATG	AGGTCCATCA	GTCTTCTGGA GTCTTCTGGA GTCTTCTGGA	GCCCTCCTT.	GGAGCTGGAG
SPLICE	FORM	1	AGCACCTCAG	.AGACCAGTG	ACATGCCAGA	GGTCTTCTCT	1800 TCCCACGAGT TCCCACGAGT TCCCACGAGT
SPLICE	FORM	1	CTTCACATGA	AGAGCCTCTC	CAGCCCTTCC	CACAGCTTGC	1850 AAGGACCAAG AAGGACCAAG AAGGACCAAG
SPLICE	FORM	1	GGAGGCCAGC	AGGTGGACAG	GGGGCCTCAG	CCTGCCCTGA	1900 AGTCCCGCCA AGTCCCGCCA AGTCCCGCCA
SPLICE	E FORM	1 1	GTCAGTGGTT	ACCCTCCAG	G GCAGTGCCGT	GGTGGCCAAC	1950 C CGGACCCAGG C CGGACCCAGG
			1951				2000

SPLICE	FORM	1	CCTTCCAGGA	GCAGGAGCAG	GGGCAGGGGC	AGGGGCAGGG A AGGGGCAGGG A	AGAGCCCTGC
							2050
			2001				2050
SPLICE	FORM	2	ATTTCCTCTA	CGCCCAGGTT	CCGGAAGGTG	GTGAGACAGG	CCAGCGTGCA
SPLICE	FORM	1	ATTTCCTCTA	CGCCCAGGTT	CCGGAAGGTG	GTGAGACAGG	CCAGCGTGCA
SPLICE	FORM	3	ATTTCCTCTA	CGCCCAGGTT	CCGGAAGGTG	GTGAGACAGG	CCAGCGTGCA
			2051				2100
SPLICE	FORM	2	TGACAGTGGA	GAGGAGGGCG	AGGCCTGAGC	CCTCACACAT	GCCCACGCTC
CDITCE	FORM	1	TCACACTCCA	CACCACCCC	AGGCCTGAGC	CCTCACACAT	GCCCACGCTC
SPLICE	LOUIN	7	TCACACTCCA	CACCACCCC	ACCCCTGAGC	CCTCACACAT	GCCCACGCTC
SELICE	FORM	3	IGACAGIGGA	GAGGAGGGG	110000101100	001011011	
			2101				2150
ant top	TO DM	2	CCCTCACACT	CNACACCATC	CNCNNCTCCT	TGGAGAAACA	CCCTCACGTC
SPLICE	FORM	2	CCCTGACACT	CARCAGORIC	CACAACTCCT	TGGAGAAACA	CCCTCACCTC
SPLICE	FORM	Ţ	CCCTGACACT	GAAGAGGATC	CACAACICCI	TCCACAAACA	CCCTCACCTC
SPLICE	FORM	3	CCCTGACACT	GAAGAGGATC	CACAACTCCI	TGGAGAAACA	CCCTCACGIC
							2200
		_	2151			CCCA BA CCCC	
				CACATTCCTC	TCAGCTCCGC	CCCATACCCG	TCACTACAGC
SPLICE	FORM	1	TGTTGCCGCA	CACATTCCTC	TCAGCTCCGC	CCCATACCCG	TCACTACAGC
SPLICE	FORM	3	TGTTGCCGCA	CACATTCCTC	TCAGCTCCGC	CCCATACCCG	TCACTACAGC
							00-0
			2201				2250
SPLICE	FORM	2	CTCACCTCCC	ACCCCTGTCA	CTACGGCCTC	ACCTCCCACC	CCTGTCACTA
SPLICE	FORM	1	CTCACCTCCC	ACCCCTGTCA	CTACGGCCTC	ACCTCCCACC	CCTGTCACTA
SPLICE	FORM	3	CTCACCTCCC	ACCCCTGTCA	CTACGGCCTC	ACCTCCCACC	CCTGTCACTA
			2251				2300
SPLICE	FORM	2	CAGCCTCACC	TCCTACAGCC	TTAAGTCCCA	GGCCCATGTC	TGCCTGTCCA
SPLICE	FORM	1	CAGCCTCACC	TCCTACAGCC	TTAAGTCCCA	GGCCCATGTC	TGCCTGTCCA
SPLICE	FORM	3	CAGCCTCACC	TCCTACAGCC	: TTAAGTCCCA	GGCCCATGTC	TGCCTGTCCA
OIHIOM	10141	•	01.0001				
			2301				2350
SPLICE	FORM	2		ACTTTCTAAC	TGGGATGTGG	TAGAGGGACT	GAAGGTACCT
SPLICE		1 1	ACCCCTCAAC	. ACTTTCTAAC	TECEATETE	TAGAGGGACT	GAAGGTACCT
						TAGAGGGACT	
SPLICE	FORM	ıs	AGGGC I CAAG	ACITICIANO	, IGGGAIGIGG	THORGOOM	012100111001
			2351				2400
				03 003 000m7		CAACTCTAGC	
SPLICE	FORM	12	TTGGGGGCAA	CAGCACCCTA	GITICATICI COMMICATOR	CAACTCTAGC	CCTGCACACT
SPLICE	FORM	1 1	TTGGGGGCAA	CAGCACCCTA	GITTCATICE	ODATIOIOAAO	CCTCCACACT
SPLICE	FORM	13	TTGGGGGCA	A CAGCACCCTA	A GTTTCATTCT	CAACTCTAGC	CCIGCACACI
							2450
			2401				
SPLICE	FORM	12	CACCTGTGG	C ACGGAATGA	A AACAGAGCTT	CCCGTGCAAA	AAGGGTCACG
SPLICE	FORM	1 1	CACCTGTGG	C ACGGAATGA	A AACAGAGCTT	CCCGTGCAAA	AAGGGTCACG
SPLICE	FORM	13	CACCTGTGG	C ACGGAATGA	A AACAGAGCTT	CCCGTGCAAA	AAGGGTCACG
			2451				2500
SPLICE	E FORM	4 2	CCTCCCACC	CCGCCCCCT	C CCTGCACCTC	CTGTCCTCTC	CCAGTTCATT
SPLICE	E FORM	4 1	CCTCCCACC	CCGCCCCCT	CCTGCACCTC	CTGTCCTCTC	CCAGTTCATT
SPLICE	E FORM	4 3	CCTCCCACC	CCGCCCCT	C CCTGCACCT	CTGTCCTCTC	CCAGTTCATT
			2501				2550
SPT.TC	TACE 5	y :		A GCCAGGCCA	G GCAACCAGT	G GCCCCAAAG	GCAGGCAGGA
SPI TO	יסטע ז	- 1 VI 1	CCTCGAACC	A GCCAGGCCA	G GCAACCAGTO	GCCCCCAAAG	GCAGGCAGGA
מסז דריו	E EUDI	VI 3	CCTCCAACC	A GCCAGGCCA	G GCAACCAGTO	GCCCCAAAG	GCAGGCAGGA
SETT	טיי יי	.· I •	J COLGGAACO				
			2551				2600
ODI TO	י דיי	M '		r	G GAGGCTGGA	A GGGCTGGCAG	ATCGCTTCCC
SETTC.	E EVDI	M 1	1 TOCTORGGO	C CC76CCCCC	G GAGGCTGGA	A GGGCTGGCAG	ATCGCTTCCC
OPT TO	E EORI	M í	T TOCTOURGE	C CCAGCCGCG	C CACCCTCCA	A GGGCTGGCAG	ATCGCTTCCC
SPLIC	r roki	면.	3 ICCICAGGC	C CCAGCCGCG	G GREGETORN	. 30001000AC	

SPLICE FORM 1 TCATCCACCT CCACCGGTCC AGGTCTTTGC TGCTGTCCCC AGACCTCT SPLICE FORM 1 TCATCCACCT CCACCGGTCC AGGTCTTTGC TGCTGTCCCC AGACCTCT SPLICE FORM 3 TCATCCACCT CCACCGGTCC AGGTCTTTGC TGCTGTCCCC AGACCTCCT SPLICE FORM 3 TCATCCACCT CCACCGGTCC AGGTCTTTGC TGCTGTCCCC AGACCTCCT SPLICE FORM 1 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 3 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 3 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 3 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 1 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 3 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 3 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 1 GCTTTGTACT GAGAAATAAA ACACATTTTC ATAAAAAAAA AAAAAAAAAA								
SPLICE FORM 1 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 3 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 3 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 3 TGACACCACG CCAGATCACA GGGCACCAGG CCAGAGATAG TCTTCTTTT SPLICE FORM 2 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 3 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 3 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 2 GCTTTGTACT GAGAAATAAA ACACATTTTC ATAAAAAAAA AAAAAAAAAA	SPLICE	FORM	2 T	CATCCACCT	CCACCGGTCC	AGGTCTTTGC	TGCTGTCCCC	AGACCTCCTG
SPLICE FORM 2 GTCCTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 1 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 3 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT SPLICE FORM 3 GTCCTTTCTG GCCTCTGGCT AGTCAGTTTT TCATAGCCTT ACAGTATCT 2751 SPLICE FORM 2 GCTTTGTACT GAGAAATAAA ACACATTTC ATAAAAAAAA AAAAAAAAAA	SPLICE	FORM	2 T 1 T	GACACCACG	CCAGATCACA	GGGCACCAGG	CCAGAGATAG	2700 TCTTCTTTTT TCTTCTTTTT TCTTCTTTTT
SPLICE FORM 2 GCTTTGTACT GAGAAATAAA ACACATTTC ATAAAAAAAA AAAAAAAAAA	SPLICE	FORM	2 6	TCCTTTCTG	GCCTCTGGCT	AGTCAGTTTT	TCATAGCCTT	ACAGTATCTG
SPLICE FORM 2 AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAA	SPLICE	FORM	2 0	GCTTTGTACT	GAGAAATAAA	ACACATTTTC	ATAAAAAAAA	AAAAAAAAA
2851 SPLICE FORM 2 AAAAAAAAAA AAAAAAAAA AAAAAAAAA AAAAAA	SPLICE	FORM	2 7	AAAAAAAAAA ~~~	~~~~~~~	~~~~~~~	~~~~~~~	2850 AAAAAAAAA ~~~~~~~
SPLICE FORM 3 ***********************************			;	2851				
SPLICE FORM 2 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGL SPLICE FORM 1 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGL FORM 3 MALVTVSRSP PGSGASTPVG PWDQAVQRRS RLQRRQSFAV LRGAVLGL LRGAVLGL FORM 2 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHL SPLICE FORM 1 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHL SPLICE FORM 3 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHL SPLICE FORM 2 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 1 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 3 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 2 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIC SPLICE FORM 1 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIC SPLICE FORM 3 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIC SPLICE FORM 2 WATLOVLHOA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTERS	SPLICE	E FORM	1 1	AAAAAAAAA ~~~~~~~ ~~~~~~~	AAAAAAAAA ~~~~~~~ ~~~~~~~	AAAAAAAAA ~~~~~~~~	AAAAAAAA ~~~~~~~ ~~~~~~	AAAA ~~~~ ~~~
SPLICE FORM 2 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHL SPLICE FORM 1 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHL SPLICE FORM 3 GGDNDDAAEA SSEPTEKAPS EEELHGDQTD FGQGSQSPQK QEEQRQHL 101 SPLICE FORM 2 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 3 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 3 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 2 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIG SPLICE FORM 3 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIG SPLICE FORM 3 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIG SPLICE FORM 2 WATLOVLHOA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTE	SPLICE	E FORM	12	MALVTVSRSP MALVTVSRSP	PGSGASTPVG PGSGASTPVG	PWDQAVQRRS PWDQAVQRRS	RLQRRQSFAV	LRGAVLGLQD
SPLICE FORM 2 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 1 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG SPLICE FORM 3 MVQLLRPQDD IRLAAQLEAP RPPRLRYLLV VSTREGEGLS QDETVLLG 151 SPLICE FORM 2 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIG SPLICE FORM 1 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIG SPLICE FORM 3 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIG SPLICE FORM 2 WATLOVLHOA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTE	SPLICE	E FORM	12 11	GGDNDDAAEA GGDNDDAAEA	SSEPTEKAPS	EEELHGDQTD	FGQGSQSPQK	QEEQRQHLHL
SPLICE FORM 2 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIC SPLICE FORM 1 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIC SPLICE FORM 3 FPDSSSPSCT LGLVLPLWSD TQVYLDGDGG FSVTSGGQSR IFKPISIC 201 SPLICE FORM 2 WATLOVLHOA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTE	SPLTC	E FORM	ч 1	MVQLLRPQDE MVOLLRPODE	IRLAAQLEA	RPPRLRYLLV	VSTREGEGLS	: QDETVLLGVD
SPLICE FORM 2 WATLOVLHOA CEAALGSGLV PGGSALTWAS HYQERLNSEQ SCLNEWTA	SDT.TC	T FOR	M 1	FPDSSSPSCT	r tGLVLPLWS1	O TOVYLDGDGG	G FSVTSGGQSF	K TEKBISIQIM
SPLICE FORM 3 W	SPLIC	E FOR	M 1	WATLQVLHQA WATLQVLHQA	A CEAALGSGL	V PGGSALTWAS	S HYQERLNSE(O SCLNEWTAMA
251 SPLICE FORM 2 DLESLRPPSA EPGGSSEQEQ MEQAIRAELW KVLDVSDLES VTSKEIR SPLICE FORM 1 DLESLRPPSA EPGGSSEQEQ MEQAIRAELW KVLDVSDLES VTSKEIR SPLICE FORM 3SSEQEQ MEQAIRAELW KVLDVSDLES VTSKEIR	SPLTC	E FOR	M 1	DLESLRPPS	A EPGGSSEOE	O MEQAIRAEL	W KVLDVSDLE:	S VTSKEIRQAI
301				301				350

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SPLICE FORM 2 ELRLGLPLQQ YRDFIDNQML LLVAQRDRAS RIFPHLYLGS EWNAANLEEL
SPLICE FORM 1 ELRLGLPLQQ YRDFIDNQML LLVAQRDRAS RIFPHLYLGS EWNAANLEEL
SPLICE FORM 3 ELRLGLPLQQ YRDFIDNOML LLVAQRDRAS RIFPHLYLGS EWNAANLEEL
SPLICE FORM 2 QRNRVTHILN MAREIDNFYP ERFTYHNVRL WDEESAQLLP HWKETHRFIE
SPLICE FORM 1 QRNRVTHILN MAREIDNFYP ERFTYHNVRL WDEESAQLLP HWKETHRFIE
SPLICE FORM 3 QRNRVTHILN MAREIDNFYP ERFTYHNVRL WDEESAQLLP HWKETHRFIE
SPLICE FORM 2 AARAQGTHVL VHCKMGVSRS AATVLAYAMK QYECSLEQAL RHVQELRPIA
SPLICE FORM 1 AARAQGTHVL VHCKMGVSRS AATVLAYAMK QYECSLEQAL RHVQELRPIA
SPLICE FORM 3 AARAQGTHVL VHCKMGVSRS AATVLAYAMK QYECSLEQAL RHVQELRPIA
SPLICE FORM 2 RPNPGFLRQL QIYQGILTAS RQSHVWEQKV GGVSPEEHPA PEVSTPFPLL
SPLICE FORM 2 PPEPEGGGEE KVVGMEESQA APKEEPGPRP RINLRGVMRS ISLLEPSLEL
SPLICE FORM 3 ------ ----- ------ -------
         551
SPLICE FORM 2 ESTSETSDMP EVFSSHESSH EEPLQPFPQL ARTKGGQQVD RGPQPALKSR
601
SPLICE FORM 2 QSVVTLQGSA VVANRTQAFQ EQEQGQGQG GEPCISSTPR FRKVVRQASV
651
SPLICE FORM 2 HDSGEEGEA
SPLICE FORM 1 ~~~~~~
SPLICE FORM 3 ~~~~~~~
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